

CASE STUDY MACROECONOMICS

J.P. MORGAN PRIME MONEY MARKET FUND AND THE EXPECTED PATH OF SHORT-TERM

BUSINESS PLAN (ASSET ALLOCATION)

- ▶ George Gatch, CEO of J.P. Morgan Asset Management, is reviewing, as of June 30, 2015, the current asset allocation of the J.P. Morgan Prime Money Market Fund (ticker VMVXX)
- ▶ Short-term interest rates in the US, and in other developed countries, remain at record lows.
- ▶ The US economy has continued to recover and markets expect that the Federal Reserve will start increasing interest rates soon. There is disagreement, though, among analysts and market participants on when the Fed will raise rates for the first time and at which pace.
- ▶ Should the J.P. Morgan Prime Money Market Fund modify its current asset portfolio to better position for an eventual rate hike?
- ▶ How fast will the Fed increase interest rates and what will be the effect of monetary tightening on money markets?

CEO'S LETTER

March 25, 2015 (Unaudited)

Dear Shareholder,

Economic growth in the U.S. steadily accelerated over the past twelve months on the back of low interest rates, strong corporate earnings and falling oil prices. Over the same period, Japan's economy slipped back into recession, growth faltered in the European Union (EU) and China's economy began to cool. The changing circumstances drove central banks to divergent paths in the latter half of the reporting period. As ended February 28, 2015, the U.S. Federal Reserve (the "Fed") responded to surging domestic employment but maintained a \$1.2 trillion monthly bond buying program and indicating it may raise interest rates by mid-2015. The Bank of Japan unleashed a massive stimulus package and the European Central Bank (ECB) took an additional step to prevent a deflationary spiral. China's central bank also employed "mini-stimulus" measures to counter slowing economic growth.



"By early 2015, there were signs of economic improvement in the EU and elsewhere, though the effectiveness of central banks' policies and the impact of the global oil glut remained unclear."

bonds and 24.8% on 10-year Treasury bonds. Meanwhile, U.S. equity indexes broke through multiple record highs in the latter half of the reporting period. For the twelve months ended February 28, 2015, the Standard & Poor's 500 Index returned 15.5%, while the Barclays U.S. Aggregate Index returned 5.1%.

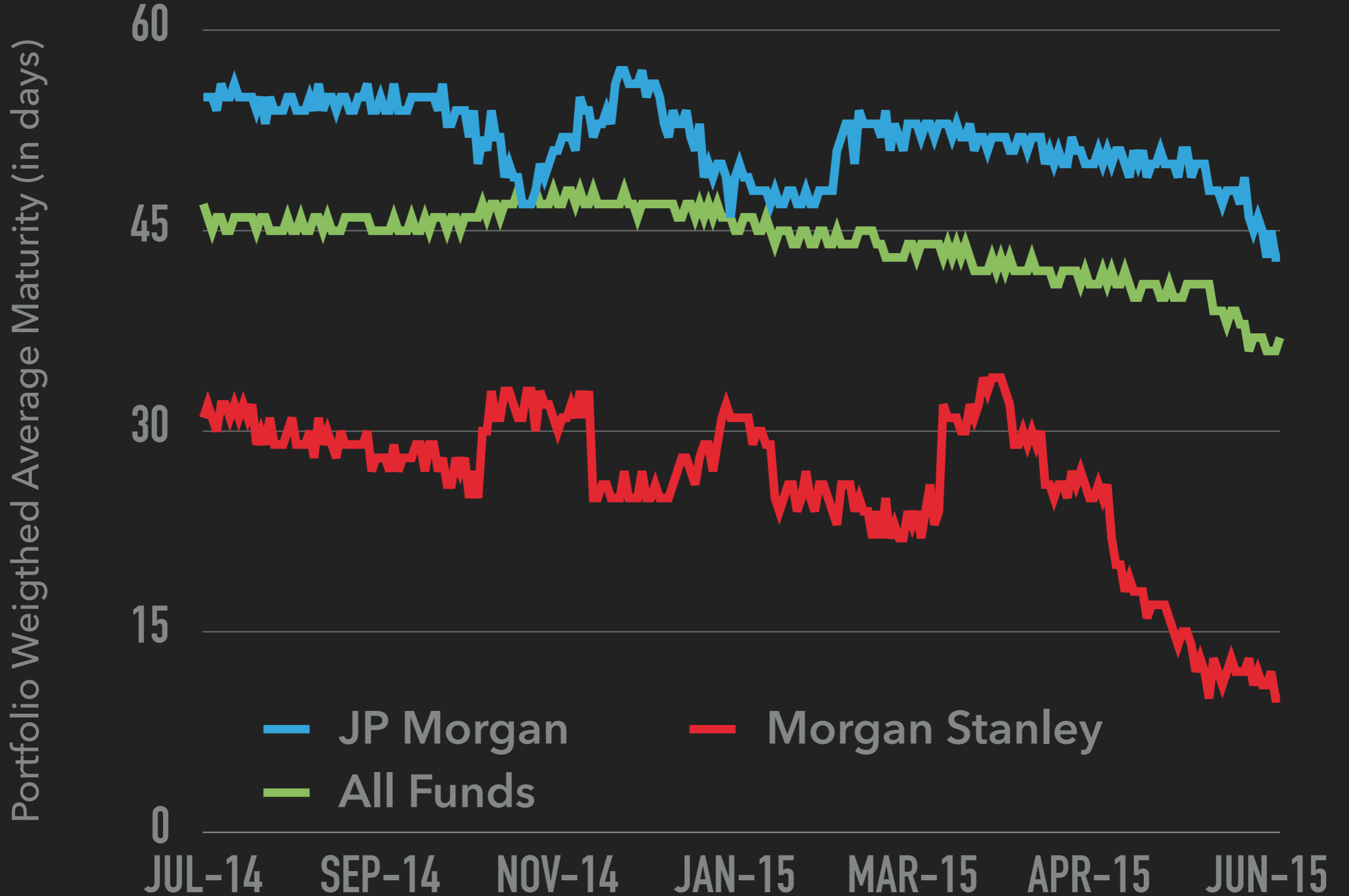
Meanwhile, weak growth in the euro zone drove the ECB to take unprecedented steps to stimulate the region's economy. In June 2014, the ECB cut its policy rate to negative 0.1% to encourage banks to extend lending and to combat deflation. In late January 2015, the ECB made a widely anticipated decision to expand its program of bond purchases to stimulate credit growth. While growth remained weak, there were signs of improvement as euro zone GDP rose to 0.3% in the final three months of 2014 from 0.2% in the July-September 2014 period and 0.1% in the April-June 2014 period. However, monthly inflation data remained below the ECB's target of just under 2.0%. Adding to investor uncertainty in the EU, voters in Greece installed the anti-austerity Syriza Party in government in January 2015. The move raised questions about the potential for Greece to leave the EU altogether, though after extended negotiations a revised bailout package was agreed upon. In Ukraine, fighting between the army and separatist rebels backed by Russia erupted during the summer months and again in early 2015, before a shaky truce had taken hold.

In Japan, Prime Minister Shinzo Abe approved a \$29 billion plan

KEY FIGURES

- ▶ The J.P. Morgan Prime Money Market Fund is one of the asset units of J.P. Morgan Asset Management
- ▶ The fund aims to provide the highest possible level of current income while still maintaining liquidity and preserving capital.
- ▶ It was founded in 1993 and currently controls assets worth US \$ 116 billion.
- ▶ Most assets under the fund's control are short-term fixed-income securities. Only 7% of the fund's assets are invested in securities with maturity longer than 180 days.

MONEY MARKET IN THE US



FED FUNDS

- ▶ According to the June 2015 FOMC Fed officials believe economic conditions are approaching levels that could warrant a start to rate hikes.
- ▶ In the last two months a stronger market consensus of an interest rate liftoff before year's end pushed down prices of the 2-year treasury note, which are highly influenced by prospects on the policy rate.
- ▶ Yields climbed to 0.73% in June from 0.49% at the beginning of April (see figure 2).

2 YEAR TREASURY



— 2-Year Treasury Constant Maturity Rate

TAYLOR RULE

$$i_t = r_t^n + \pi_t^* + \phi_\pi (\pi_t - \pi_t^*) + \phi_y \left(100 \times \frac{Y_t - Y_{t-1}}{Y_{t-1}} - y_t^* \right)$$

Inflation Target=2%

Output Growth Rate Target=3%

Coefficient Inflation=Coefficient Output = 0.5

ECONOMIC FORECASTS

	Inflation	GDP Growth	Natural Real Rate	Fed Funds (Chief Economist's Forecast)
Dec-15	1.5	2.8	0.00	0.25
Jun-16	2.1	2.9	0.25	0.50
Dec-16	2.7	2.8	0.50	1.00
Jun-17	2.5	3.0	0.75	1.50

CURRENT PORTFOLIO

Allocation by Maturity	Shares	Portfolio Allocation
1-Month T Bills	0.93	\$108,344,000,000
2 Year Bond	0.07	\$7,656,000,000
	total	\$116,000,000,000

PORTFOLIO STRATEGIES

PORTFOLIO STRATEGIES

▶ Option 1

PORTFOLIO STRATEGIES

- ▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

- ▶ Hold the 2-year notes for one year, collect the coupons for the first year and sell the portfolio at future price . The expected future price (the one-year ahead price) will depend on the estimates of Fed Funds

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

- ▶ Hold the 2-year notes for one year, collect the coupons for the first year and sell the portfolio at future price . The expected future price (the one-year ahead price) will depend on the estimates of Fed Funds
- ▶ For the remain year, invest on short-term bills that bear the Fed Fund's Rate (under the 2 scenarios)

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

- ▶ Hold the 2-year notes for one year, collect the coupons for the first year and sell the portfolio at future price . The expected future price (the one-year ahead price) will depend on the estimates of Fed Funds
- ▶ For the remain year, invest on short-term bills that bear the Fed Fund's Rate (under the 2 scenarios)

▶ Option 3

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

- ▶ Hold the 2-year notes for one year, collect the coupons for the first year and sell the portfolio at future price . The expected future price (the one-year ahead price) will depend on the estimates of Fed Funds
- ▶ For the remain year, invest on short-term bills that bear the Fed Fund's Rate (under the 2 scenarios)

▶ Option 3

- ▶ Hold 2-year notes until maturity and collect coupons for the 2 years and the principal at maturity.

PORTFOLIO STRATEGIES

▶ Option 1

- ▶ Sell Portfolio of 2-year notes at the current yield (0.73%)
- ▶ Invest in short-term bills that bear the Fed Fund's Rate for the next 2 years (under the 2 scenarios)

▶ Option 2

- ▶ Hold the 2-year notes for one year, collect the coupons for the first year and sell the portfolio at future price . The expected future price (the one-year ahead price) will depend on the estimates of Fed Funds
- ▶ For the remain year, invest on short-term bills that bear the Fed Fund's Rate (under the 2 scenarios)

▶ Option 3

- ▶ Hold 2-year notes until maturity and collect coupons for the 2 years and the principal at maturity.
- ▶ (assuming coupons are not re-invested)

FINDING THE RETURNS OF OPTION 2

- ▶ Find the current price of the 2 Year Treasury using the current yield (0.73)
- ▶ Find the price of the 2 Year Treasury one year ahead (the price next year) under the 2 scenarios of interest rates
- ▶ Find out how much revenue will generate next year the sale of the 2 Year Treasury bonds.
Compute the return of investing the proceeds of selling the 2 Year Bonds and the coupons using forecast interest rates under the 2 scenarios

FINDING THE RETURNS OF OPTION 3

- ▶ Compute coupons and maturity of the 2 Year Treasury